

**In The Claims**

1 1. (cancelled without prejudice)

1 2. (currently amended) An apparatus comprising:  
2 a moldable sheath with sufficient moldability at body temperatures to at least  
3 temporarily retain a specific shape selectively imparted to it by a user by bending of the  
4 sheath along its length, which specific shape is held without continued inserted  
5 presence of a shaping tool in the sheath; and  
6 a lumen defined in said moldable sheath.

1 3. (original) The apparatus of claim 2 further comprising a shaping tool for  
2 disposition in said lumen of said implanted sheath to impart said specific shape to said  
3 sheath.

1 4. (original) The apparatus of claim 3 where said shaping tool is separate from said  
2 sheath.

1 5. (original) The apparatus of claim 2 where said shaping tool is incorporated within  
2 said sheath.



1 6. (original) The apparatus of claim 2 further comprising a sealing valve coupled to  
2 said sheath to seal said lumen.

1 7. (cancelled without prejudice)

1 8. (original) The apparatus of claim 2 where said sheath has at least one portion  
2 with a stiffness different than remaining portions of said sheath.

1 9. (original) The apparatus of claim 2 where said sheath has at least one portion  
2 with a moldability different than remaining portions of said sheath.

1 10. (original) The apparatus of claim 2 where said sheath is deployed in a body  
2 cavity and has at least one portion with a moldability which can be altered at the time of  
3 implantation in said body cavity.

1 11 (original) The apparatus of claim 10 where said at least one portion has its  
2 moldability altered before said sheath is implanted into said body cavity.

1 12. (original) The apparatus of claim 10 where said at least one portion has its  
2 moldability altered after said sheath is implanted into said body cavity.



1 13. – 28. (cancelled without prejudice)

1 29. (allowed) An apparatus comprising:

2 a moldable sheath capable of at least temporarily retaining a specific shape

3 selectively imparted to it by a user by bending of the sheath along its length; and

4 a shaping tool arranged and configured to be applied to said implanted sheath to

5 impart said specific shape to said sheath while within said body cavity, which specific

6 shape is held without continued inserted presence of said shaping tool in the sheath.

1 30. (allowed) The apparatus of claim 29 where said sheath is characterized by a

2 sufficient moldability so that removal of said shaping tool does not result in any

3 substantial displacement of said sheath from said specific shape.

1 31. (allowed) The apparatus of claim 29 where said sheath has a lumen and where

2 said shaping tool applied to said sheath comprises an elongate shaping tool which is

3 telescopically disposed within said lumen in said sheath.

1 32. (allowed) An apparatus comprising:

2 a moldable sheath capable of at least temporarily retaining a specific shape

3 imparted to it; and



4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific  
6 shape is held without continued assistance of said shaping tool,  
7 where said shaping tool applied to said sheath comprises a shaping tool applied  
8 exteriorly to said sheath and imposing a shaping force thereon.

1 33. (withdrawn) The apparatus of claim 29 further comprising a medical instrument  
2 disposed into said body cavity through said sheath.

1 34. (withdrawn) The apparatus of claim 29 where medical instrument comprises a  
2 diagnostic instrument.

1 35. (withdrawn) The apparatus of claim 29 where said medical instrument comprises  
2 a therapeutic instrument.

1 36. (withdrawn) The apparatus of claim 29 where said medical instrument comprises  
2 a cardiac lead for disposition within the coronary sinus of a human heart.

1 37. (allowed) The apparatus of claim 29 where said moldable sheath has at least a  
2 portion of changed moldability relative to remaining portions of said sheath.



1 38. (allowed) The apparatus of claim 37 where said portion which changes its  
2 moldability while in said body cavity comprises at least a portion of said sheath having a  
3 moldability dependant on temperature in which said moldability of said sheath is  
4 changed while in said body cavity and exposed to a body cavity temperature elevated  
5 above ambient temperature.

1 39. (allowed) An apparatus comprising:

2 a moldable sheath capable of at least temporarily retaining a specific shape  
3 imparted to it; and

4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific  
6 shape is held without continued assistance of said shaping tool,

7 where said moldable sheath has at least a portion of changed moldability relative  
8 to remaining portions of said sheath,

9 where said portion which changes its moldability while in said body cavity  
10 comprises at least a portion of said sheath having a moldability dependant on  
11 temperature in which said moldability of said sheath is changed while in said body  
12 cavity and exposed to a body cavity temperature elevated above ambient temperature,  
13 and

14 where said portion which changes its memory shape while in said body cavity  
15 comprises at least a portion having a moldability dependant on moisture in which said  
16 moldability of said sheath is changed while in said body cavity and exposed to moisture.



1 40. (allowed) The apparatus of claim 37 where said portion of changed moldability  
2 has its moldability changed by treating at least a portion of said sheath exterior to said  
3 body cavity prior to implanting.

1 41. (allowed) An apparatus comprising:  
2 a moldable sheath capable of at least temporarily retaining a specific shape  
3 imparted to it; and  
4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific  
6 shape is held without continued assistance of said shaping tool;  
7 where said moldable sheath has at least a portion of changed moldability  
8 relative to remaining portions of said sheath,  
9 where said portion of changed moldability has its moldability changed by treating  
10 at least a portion of said sheath exterior to said body cavity prior to implanting, and  
11 where said portion of changed moldability has its moldability changed by  
12 exposing at least a portion of said sheath to radiation.

1 42. (withdrawn) The apparatus of claim 40 where said portion of changed moldability  
2 has its moldability changed by exposing at least a portion of said sheath to a chemical  
3 treatment.



1 43. (withdrawn) The apparatus of claim 29 further comprising a reinforcement  
2 selectively disposed on or in said sheath so that a reinforced portion of said sheath has  
3 its stiffness increased relative to remaining portions of said sheath.

1 44. (withdrawn) The apparatus of claim 29 further comprising a reinforcement  
2 selectively disposed on or in said sheath so that a reinforced portion of said sheath has  
3 its ability to retain a specific shape enhanced relative to remaining portions of said  
4 sheath.

1 45. (withdrawn) The apparatus of claim 44 where said reinforcement comprises  
2 wires, fibers or braid disposed on or on said sheath.

1 46. (withdrawn) The apparatus of claim 43 where said reinforcement comprises a  
2 braided reinforcement on or in said sheath.

1 47. (withdrawn) The apparatus of claim 43 where said reinforcement comprises  
2 fibers disposed on or in said sheath to provide kink resistance.

1 48. (withdrawn) The apparatus of claim 43 where said reinforcement comprises at  
2 least one layer of material at least partially concentrically disposed on or in said sheath.



1 49. (withdrawn) The apparatus of claim 48 where said at least one layer of material  
2 at least partially concentrically disposed on or in said sheath comprises at least one  
3 cylindrical layer telescopically disposed on or in said sheath.

1 50. (withdrawn) The apparatus of claim 48 where said sheath has a wall with a  
2 predetermined thickness and where said at least one layer of material at least partially  
3 concentrically disposed on or in said sheath comprises a thickening of said sheath wall.

1 51. (withdrawn) The apparatus of claim 48 where said one layer of material has a  
2 moldability different than said sheath.

1 52. (withdrawn) The apparatus of claim 48 where said one layer of material is not  
2 moldable like said sheath.

1 53. (allowed) An apparatus comprising:  
2 a moldable sheath capable of at least temporarily retaining a specific shape  
3 imparted to it; and  
4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific  
6 shape is held without continued assistance of said shaping tool, where said moldable  
7 sheath has a tip portion and where said tip portion is substantially soft and compliant  
8 without appreciable moldability.



1 54. (withdrawn) The apparatus of claim 29 where said moldable sheath is splittable,  
2 tearable, slittable or peelable.

1 55. (allowed) The apparatus of claim 29 where said moldable sheath is preshaped  
2 according to its intended application within said body cavity.

1 56. (allowed) The apparatus of claim 29 where said sheath has a proximal end and  
2 further comprising a sealing valve disposed on said proximal end.

1 57. (withdrawn) The apparatus of claim 56 where said sealing valve is splittable,  
2 tearable, slittable or peelable.

1 58. (allowed) The apparatus of claim 56 where said sealing valve is integral with  
2 said sheath.

1 59. (allowed) The apparatus of claim 56 where said sealing valve is separate from  
2 said sheath.

1 60. (allowed) The apparatus of claim 29 further comprising at least one wire  
2 disposed in said sheath and usable for deflecting and positioning said sheath.



1 61. (withdrawn) The apparatus of claim 29 further comprising at least one wire  
2 disposed in said sheath for providing an electrical conductor therein.

1 62. (withdrawn) The apparatus of claim 61 where said sheath has a distal end and  
2 further comprising a diagnostic or therapeutic device at or near said distal end and  
3 coupled to said conductor.

1 63. (withdrawn) The apparatus of claim 62 where said diagnostic or therapeutic  
2 device comprises an ultrasound imager.

1 64. (withdrawn) The apparatus of claim 29 further comprising a lumen defined in  
2 said sheath and at least one inflatable balloon disposed on said sheath coupled to said  
3 balloon.

1 65. (withdrawn) The apparatus of claim 64 where said balloon is removable from  
2 said sheath.

1 66. (withdrawn) The apparatus of claim 61 further comprising an electrode disposed  
2 on or in said sheath and coupled to said conductor.



1 67. (withdrawn) The apparatus of claim 29 further comprising at least one optic fiber  
2 disposed in said sheath for providing an optical conductor therein.

1 68. (withdrawn) The apparatus of claim 67 where said sheath has a distal end and  
2 further comprising a photonic device disposed in or near said distal end of said sheath  
3 and coupled to said optic fiber.

1 69. (withdrawn) The apparatus of claim 29 further comprising a lumen defined in  
2 said sheath and a vent communicated to said lumen so that fluid may be infused or  
3 suctioned therethrough.

1 70. (allowed) The apparatus of claim 29 where said shaping tool is steerable.

1 71. (allowed) The apparatus of claim 29 where said shaping tool comprises a  
2 guidewire.

1 72. (allowed) An apparatus comprising:  
2 a moldable sheath capable of at least temporarily retaining a specific shape  
3 imparted to it; and  
4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific



6 shape is held without continued assistance of said shaping tool, where said shaping tool  
7 has a tip portion which is substantially soft and compliant without substantial moldability  
8 rendering it nontraumatic.

1 73. (allowed) An apparatus comprising:

2 a moldable sheath capable of at least temporarily retaining a specific shape  
3 imparted to it; and

4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific  
6 shape is held without continued assistance of said shaping tool, where said shaping tool  
7 further comprises at least one lumen defined therethrough and a vent communicated  
8 with said lumen.

1 74. (allowed) An apparatus comprising:

2 a moldable sheath capable of at least temporarily retaining a specific shape  
3 imparted to it; and

4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific  
6 shape is held without continued assistance of said shaping tool, where said shaping tool  
7 further comprises a lumen defined therethrough and at least one inflatable balloon  
8 communicated with said lumen.



1 75. (allowed) An apparatus comprising:  
2 a moldable sheath capable of at least temporarily retaining a specific shape  
3 imparted to it; and  
4 a shaping tool arranged and configured to be applied to said implanted sheath to  
5 impart said specific shape to said sheath while within said body cavity, which specific  
6 shape is held without continued assistance of said shaping tool, where said shaping tool  
7 further comprises a conductor disposed therethrough and an electrode coupled to said  
8 conductor for sensing or delivery of energy from said electrode.

1 76. (withdrawn) An apparatus comprising:  
2 a peel-away sheath with sufficient flexibility to be selectively guideable; and  
3 a steering or guiding tool to impart a selected shape to said sheath.

1 77. (withdrawn) The apparatus of claim 76 where said peel-away sheath is  
2 nonmoldable.

1 78. (withdrawn) The apparatus of claim 76 further comprising a proximal sealing  
2 valve coupled to said sheath.

1 79. (withdrawn) The apparatus of claim 76 further comprising a distal diagnostic or  
2 therapeutic device coupled to said sheath.



1 80. (withdrawn) The apparatus of claim 76 where said peel-away sheath separates  
2 along a longitudinally oriented score line defined in said peel-away sheath.  
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1 81. (withdrawn) An apparatus comprising:  
2 a peel-away sheath with sufficient flexibility to be selectively guideable including  
3 an elongated flexible body having a proximal end and a distal end; and  
4 a peel-away balloon mounted on said flexible body near said distal end thereof.

1 82. (withdrawn) An apparatus comprising:  
2 a moldable, peel-away sheath with sufficient flexibility to be selectively guideable;  
3 and  
4 a dilator telescopically disposable with said sheath so that said sheath may be  
5 vascularly implanted.

1 83. - 89. (cancelled without prejudice)

1 90. (allowed) An apparatus comprising:  
2 a moldable sheath with sufficient moldability at body temperatures to at least  
3 temporarily retain a specific shape imparted to it; and  
4 a lumen defined in said moldable sheath, where said sheath has at least one  
5 portion with a stiffness different than remaining portions of said sheath wherein the



6 sheath is comprised of a relatively stiffer proximal portion and relatively stiffer distal  
7 portion extending to a distal tip with a relatively less stiff intermediate portion  
8 therebetween.

1 91. (allowed) An apparatus comprising:  
2 a moldable sheath with sufficient moldability at body temperatures to at least  
3 temporarily retain a specific shape imparted to it; and  
4 a lumen defined in said moldable sheath, where said sheath has at least one  
5 portion with a moldability different than remaining portions of said sheath wherein the  
6 sheath is comprised of a relatively less moldable proximal portion and relatively less  
7 moldable distal portion extending to a distal tip with a relatively more moldable  
8 intermediate portion therebetween..

1 92. (withdrawn) The apparatus of claim 9 comprised of a nonmoldable resilient  
2 proximal portion and nonmoldable, resilient distal portion extending between 1 to 15 cm  
3 from a distal tip with a moldable intermediate portion therebetween.

1 93. (new)<sup>1</sup> A method of using a moldable sheath and using a shaping tool comprising:  
2 providing a moldable sheath with sufficient moldability to at least temporarily  
3 retain a specific shape selectively imparted to it by a user by bending of the sheath  
4 along its length when implanted in a body cavity and by using the shaping tool which is

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<sup>1</sup> Derived from claims 1 and 29.



5 arranged and configured to impart the specific shape to the sheath while within the body  
6 cavity, which specific shape is held;  
7       implanting the sheath within a body cavity;  
8       molding the implanted sheath to the specific shape, which specific shape is held  
9 without continued assistance of a shaping tool; and  
10       utilizing the implanted sheath for a medical procedure.

1       94.   (new)<sup>2</sup> A method of using a moldable sheath and using a shaping tool  
2 comprising:  
3       providing a moldable sheath capable of at least temporarily retaining a specific  
4 shape imparted to it when implanted in a body cavity by a user by bending of the sheath  
5 along its length when implanted in a body cavity and by using the shaping tool which is  
6 arranged and configured to impart the specific shape to the sheath while within the body  
7 cavity, which specific shape is held;  
8       implanting the sheath within a body cavity;  
9       molding the implanted sheath to the specific shape while within the body cavity,  
10 which specific shape is held without continued assistance of a shaping tool; and  
11       utilizing the implanted sheath for a medical procedure within the body cavity  
12 while the sheath is in the specific shape.

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<sup>2</sup> Derived from claims 13 and 29.



1           95.   (new) The method of claim 94 where molding the implanted sheath to a  
2 specific shape comprising applying a shaping tool to the sheath to induce the sheath to  
3 assume the specific shape.

1           96.   (new) The method of claim 94 further comprising removing a shaping tool  
2 from the sheath when the sheath is characterized by a sufficient moldability so that  
3 removal of the shaping tool does not result in any substantial displacement of the  
4 sheath from the specific shape.

1           97.   (new) The method of claim 95 where applying a shaping tool to the  
2 sheath comprises telescopically disposing the shaping tool within a lumen in the sheath.

1           98.   (new) The method of claim 95 where applying a shaping tool to the  
2 sheath comprises manipulating the shaping tool to steer the sheath.

1           99.   (new) The method of claim 95 where applying a shaping tool to the  
2 sheath comprises disposing the shaping tool exteriorly to the sheath and imposing a  
3 shaping force thereon.

1           100. (new) The method of claim 94 where utilizing the implanted sheath for a  
2 medical procedure comprises disposing a medical instrument in the body cavity.



1           101. (new) The method of claim 94 where utilizing the implanted sheath for a  
2 medical procedure comprises performing a diagnostic procedure within the body cavity.

1           102. (new) The method of claim 94 where utilizing the implanted sheath for a  
2 medical procedure comprises performing a therapeutic procedure within the body  
3 cavity.

1           103. (new) The method of claim 94 where utilizing the implanted sheath for a  
2 medical procedure comprises disposing a cardiac lead in the coronary sinus of a human  
3 heart.

1           104. (new) The method of claim 94 wherein the sheath has a moldability and  
2 further comprising changing the moldability of at least a portion of the sheath.

1           105. (new) The method of claim 94 where providing a moldable sheath  
2 comprises providing a sheath having a moldability dependant on temperature and  
3 where changing the moldability of the sheath while in the body cavity comprises  
4 exposing at least a portion of the sheath to a body cavity temperature elevated above  
5 ambient temperature.



1           106. (new) The method of claim 104 where providing a moldable sheath  
2 comprises providing a sheath having a moldability dependant on moisture and where  
3 changing the moldability of the sheath while in the body cavity comprises exposing at  
4 least a portion of the sheath to moisture.

1           107. (new) The method of claim 104 where changing the moldability of the  
2 sheath comprises causing a change of the moldability of the sheath by treating at least  
3 a portion of the sheath exterior to the body cavity prior to implanting.

1           108. (new) The method of claim 107 where treating the sheath exterior to the  
2 body cavity prior to implanting to change its moldability comprises exposing at least a  
3 portion of the sheath to radiation.

1           109. (new) The method of claim 107 where treating the sheath exterior to the  
2 body cavity prior to implanting to change its moldability comprises exposing at least a  
3 portion of the sheath to a chemical treatment.

1           110.<sup>3</sup> (new) An apparatus for use with an implanted sheath moldable into a  
2 specific shape comprising:

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<sup>3</sup> Formerly claim 83.



3 a steerable, shaping tool arranged and configured to be applied to the implanted  
4 sheath to impart the specific shape to the sheath while within the body cavity, which  
5 specific shape is held without continued assistance of the shaping tool; and  
6 a proximal steering handle coupled to the steerable, shaping tool.

1 111. (new) The apparatus of claim 110 wherein the steerable, shaping tool is  
2 characterized by a selectable shape and comprises at least one wire disposed in the  
3 steerable, shaping tool coupled to the proximal steering handle by which wire the shape  
4 of the steerable, shaping tool is controlled.

1 112. (new) The apparatus of claim 110 further comprising an inflatable balloon  
2 coupled to the steerable, shaping tool.

1 113. (new) The apparatus of claim 110 wherein the steerable, shaping tool is a  
2 steerable catheter.

1 114. (new) The apparatus of claim 113 wherein the steerable catheter further  
2 comprises at least one electrode.



1           115. (new) The apparatus of claim 113 wherein the steerable catheter further  
2 comprises at least one lumen and an communicating orifice allowing communication of  
3 fluid through the lumen and orifice.

1           116. (new) The apparatus of claim 113 further comprising an inflatable balloon  
2 coupled to the catheter.